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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,774	12/09/2003	Thomas Szolyga	200312966-1	6955

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EXAMINER

BORKOWSKI, ROBERT

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/732,774

Applicant(s)

SZOLYGA ET AL.

Examiner

Robert Borkowski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 09, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 09, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

It appears to the examiner that the “the computer circuitry 102” (paragraph 016 line 3) refers to element 106.

It appears to the examiner that the “front panel 302” (paragraph 024 line 5) refers to element 202.

Appropriate correction is required.

Claim Objections

2. Claims 5-6, 11-12, 16-17 are objected to because of the following informalities:

As per claims 5, 6, 16, and 17, “light emitting” should be changed to --light-emitting--.

As per claim 11, it appears to the examiner that the claim 11 refers to claim 10. Claim 11 further limits claim 11.

As per claim 12, a period is missing on the end of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-3, 7-14, 18-22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bardmesser (U.S. Patent No. 5,986,992).

As to claims 1, 21, and 22, Bardmesser teaches a mass storage device operable to store data (column 3 lines 19-29, Fig. 3 element 1) and having an overall storage capacity (Abstract, Fig. 1 element 4), the mass storage device including a panel (column 2 lines 63-67, Fig. 1 element 4) on which a capacity indicator is positioned and the capacity indicator being operable to display either a used storage capacity (column 4 lines 5-10, Fig. 5 element 41, Fig. 6 element 41, Fig. 7 element 4) or a free storage capacity of the mass storage device (column 4 lines 5-10, Fig. 5 element 42, Fig. 6 element 42, Fig. 7 element 4), or being operable to display both free and used storage capacity of the mass storage device (column 4 lines 5-10, Fig. 5 element 40, Fig. 6 element 40, Fig. 7 element 4).

As to claims 2, and 13, Bardmesser teaches the mass storage device comprises a removable device (Abstract, column 3 lines 1-6, 15-28, Fig. 3 element 1).

As to claims 3, and 14, Bardmesser teaches the mass storage device comprises a removable hard disk (Abstract, column 3 lines 19-29, Fig. 1 element 1, Fig. 3 element 20).

As to claims 7, and 18, Bardmesser teaches the mass storage device wherein the capacity indicator comprises a liquid crystal display (column 2 lines 63-67, column 4 line 63 through column 5 line 4, Fig. 1, 2, 5-7, 8, 11-13 element 4).

As to claims 8, and 19, Bardmessenger teaches the mass storage device wherein the panel comprises a front panel of housing containing electronics of the mass storage device (column 3 lines 1-14, Fig. 2).

As to claims 9, 11, 20, and 24, Bardmessenger teaches the mass storage device is adapted to receive capacity-update signals (Abstract, column 3 lines 19-22, lines 38-45, Fig. 4 element S4) and wherein the capacity indicator is operable to display the storage capacity or capacity responsive to the capacity-update signals (column 2 lines 13-20, column 3 lines 38-45, Fig. 4 element S5).

As to claim 10, Bardmessenger teaches a computer system, comprising computer circuitry for executing programs and storing data (column 3 lines 15-45, Fig. 3 element 20); and a mass storage device coupled to the computer circuitry (column 3 lines 19-29, column 5 lines 15-22, column 4 lines 43-50, Fig. 3, 9 element 20, Fig. 10 element 60, Fig. 13 element 70).

As to claim 12, Bardmessenger teaches a computer system comprising:
at least one input device coupled to the computer circuitry (column 2 lines 13-30, column 3 lines 19-29, column 4 lines 43-50, column 5 lines 15-22, Fig. 3 and 9 element 20, Fig. 10 element 60, Fig. 13 element 70); and

at least one output device coupled to the computer circuitry (column 2 lines 13-30, column 3 lines 19-29, column 4 lines 43-50, column 5 lines 15-22, Fig. 3 and 9 element 20, Fig. 10 element 60, Fig. 13 element 70).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6, 15-17, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardmessenger (U.S. Patent No. 5,986,992) in view of Miyazaki (U.S. Patent Application No. 2004/0042761).

With regards to claims 4-6, 15-17, and 23, Bardmessenger fails to teach wherein the mass storage device includes a plurality of light emitting-diodes having a plurality of different colors.

However, Miyazaki discloses a recording/reproducing apparatus (Abstract), in which he teaches wherein the display (Fig. 1 element 10) indicates 5-level capacity using five light-emitting diodes, LEDs (paragraph 0026) indicating a ratio of remaining capacity of the full capacity. A remaining capacity can be displayed in more detail by increasing the number of LED. An emitting color of LED may be changed depending on a remaining capacity (paragraph 0032).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bardmesser to include wherein the mass storage device includes a plurality of LEDs having a plurality of different colors depending on a remaining capacity of the mass storage device instead of LCD. LEDs are less expensive and provide brighter light illumination. LED's bright and different light illumination would ease a user to determine remaining capacity of the mass storage device. A red color LED would inform a user of a very low storage capacity. When working with a large number of storage devices, determining a device with adequate remaining capacity (column 1, lines 13-15 of Bardmesser) by reading from LCD (LCDs have lower light illumination than LEDs and LCDs display small text difficult to read) one would find cumbersome. A bright color LED display allows a quick glance from a distance permitting a user to be informed about the device's adequate remaining capacity.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bardmesser by the teaching of Miyazaki to include a plurality of LEDs having a plurality of different colors to indicate remaining capacity of the mass storage device to allow a user to easily determine current capacity of the massive storage device.

With regards to claim 25, Bardmesser fails to teach determining external to the mass storage device a capacity of the mass storage device comprises periodically determining the capacity.

However, Miyazaki does disclose the main microprocessor (Fig. 1 element 4) requesting a remaining capacity confirmation command at regular time intervals from the HDD

microcomputer (paragraphs 0013 and 0028, Fig. 1 element 3), which constantly monitors the operation of the hard disc (Fig. 1 element 1) to check a constant capacity and confirms a remaining capacity of the moment. Furthermore, Miyazaki teaches the main microcomputer (Fig. 1 element 4) obtains a latest remaining capacity at regular time intervals, and the LEDs (Fig. 2 element 11) of the display (Fig. 2 element 10) are turned on in compliance with remaining ratio (paragraph 0028 and 0029).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bardmesser to include a constant monitoring of the hard disc to check a consumed capacity and confirm a remaining capacity wherein determine a latest remaining capacity at regular time interval, and turning on the LEDs of the display in compliance with remaining ratio (paragraph 0028 and 0029). The constant monitoring of the capacity allows a user to confirm at a glance the remaining capacity of the hard drive disc at the current time (paragraph 0027 lines 1-4, Fig. 2 element 10). It allows a user to have constantly updated capacity information of the storage device without taking any specific steps for confirming a remaining capacity. Thus, even when it is urgently necessary to record a program or the like, a remaining capacity can be confirmed at once (Fig. 2 element 10). Thus, a user can avoid making such a mistake that recording is terminated in the middle of the program (paragraph 0033) because of insufficient remaining capacity of the storage device.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Bardmesser by teaching of Miyazaki to include constant monitoring of the hard disc to check a consumed capacity and confirm a remaining capacity wherein

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determine a latest remaining capacity at regular time interval, and turning on the LEDs of the display in compliance with remaining ratio.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,644,556 to Adelman.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Borkowski whose telephone number is 571-272-8626. The examiner can normally be reached on Monday - Friday 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Borkowski


ILWOO PARK
PRIMARY EXAMINER

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07/15/2005